TOBACCO INDUSTRY RESEARCH COMMITTEE
150 EAST FORTY SECOND STREET NEW YORK 17, N. Y.

Application For Research Grant /RENEWAL

Date: June 21, 1956

1. Name of Investigator: Dr. David E. Mann, Jr. and associates

2. Title: Associate Professor of Pharmacology

3. Institution & Address: Temple University School of Pharmacy
3223 North Broad Street
Philadelphia 40, Pennsylvania

4. Project or Subject: Effect of Tobacco Smoke and Tobacco Residues on the M.C.D.t (minimal carcinogenic dose, topically) of Methylcholanthrene in Mice.

5. Detailed Plan of Procedure (Use reverse side if additional space is needed):

Object: To determine the minimal carcinogenic dose (topically) of methylcholanthrene when applied biweekly to the interscapular space of mice; to confirm the inhibition produced by the prior administration of tobacco residue by observing its effect on skin carcinogenesis produced by the minimal carcinogenic dose of methylcholanthrene; to observe the effect of tobacco smoke on the M.C.D.t of methylcholanthrene; and, lastly, to determine whether or not the lung tumors produced by the application of methylcholanthrene are metastatic by the injection of alixarin red into the skin cancer and the subsequent observation histologically of lung tissue.

Procedure:

Part I: Determination of the M.C.D.t of Methylcholanthrene.

120 Carworth Farms mice of mixed sex will be divided into 12 groups of ten mice each. Each group of animals will receive twice a week a different concentration of methylcholanthrene in acetone ranging from 0.04% to 0.15%. Applications will continue for approximately 12 weeks and tumor development will be noted. From these data the M.C.D. topically can be ascertained.

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Source: https://www.industrydocuments.ucsf.edu/docs/hxvm0000

Procedure:

Part II: Effect of Tobacco Residue on the M.C.D.$_t$ of Methylcholanthrene.

Thirty mice of mixed sex will receive biweekly applications of tobacco residue and methylcholanthrene (M.C.D.t) for approximately 12 weeks. Skin carcinogenesis will be noted. If tobacco residue inhibits methylcholanthrene-induced skin carcinogenesis no tumors should develop during this period.

Part III: Effect of Tobacco Smoke on the M.C.D.$_t$ of Methylcholanthrene.

Thirty mice of mixed sex will inhale tobacco smoke for a short period each day and will also receive the M.C.D.$_t$ of Methylcholanthren biweekly. Skin carcinogenesis will be noted during the 12 week period.

Controls: Fifteen mice will serve as controls and will remain untreated throughout the experiment.

Tobacco smoke alone:

Fifteen mice will inhale tobacco smoke for a short period each day but will not receive methylcholanthrene.

Part IV: Determination of Origin of Lung Cancer.

Thirty mice of mixed sex will receive one drop of 0.15% methylcholanthrene twice a week. As soon as skin cancers appear, each cancer will be injected with alizarin red at frequent intervals. After 20 weeks, all animals will be sacrificed and lungs will be examined for tumors. If lung tumors contain the dye, evidence of metastases will be indicated.

Materials and Methods:

Twelve-week old Carworth Farms mice (CFI) strain of mixed sex will be used throughout these studies. Each experiment will contain equal numbers of males and females which will be kept in individual cages.

The duration of each experiment is tentative and dependent upon the response of the animals to treatment. Histological studies will be made of the lungs and skin cancers of each animal (120).

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6. Budget Plan: TOBACCO INDUSTRY
150 EAST FORTY SECOND STREET

Salaries	3,000.00
Expendable Supplies	500.00
Permanent Equipment	500.00
Overhead	1,500.00 *
Other	
Total	5,500.00

Application (37.5%)

* At 15% $600.00
Total $4600.00

At 25% 900.00
Total $4900.00 P.C.H.

7. Anticipated Duration of Work:

32 weeks

8. Facilities and Staff Available:

Large animal house, adequate cages and research facilities.

STAFF: Department of Pharmacology
Dr. David E. Mann, Jr. Assoc. Prof.
One Graduate Assistant
One Instructor in Pharmacology
Department of Pathology
Dr. Frederic James (Prof. of Pathology)

9. Additional Requirements:

10. Additional Information (Including relation of work to other projects and other sources of supply):

5. Detailed Plan of Procedure (Use reverse side or additional space if necessary):

Signature
Director of Project
/s/ David E. Mann, Jr.

Business Officer of the Institution

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Source: https://www.industrydocuments.ucsf.edu/docs/hxvm0000